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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,387	11/02/2005	Takamasa Fuchikami	2005-1402A	1300

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EXAMINER	
CHO, JENNIFER Y	
ART UNIT	**PAPER NUMBER**
1621	

MAIL DATE	DELIVERY MODE
08/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,387	FUCHIKAMI ET AL.	
	Examiner	Art Unit	
	Jennifer Y. Cho	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

This office action is in response to Applicant's communication filed on 6/4/2007.

Claims 1-6, 8-11 are pending in this application.

In view of Applicant's claim amendments filed 6/4/2007, the rejections under 35 U.S.C. 112 have been vacated.

Applicant's arguments, filed 6/4/2007, with respect to 35 USC 102 have been fully considered and are persuasive. The 35 USC 102 rejection has been withdrawn.

Claim Rejections – 35 USC 103

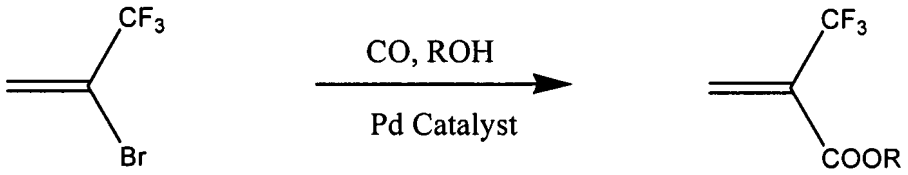
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 8-11 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Matteoli et al. (Journal of Molecular Catalysis A: Chemical 143, 1999, 287-295), in view of Fuchikami et al. (US 4,855,487).

Matteoli et al. teaches a process for producing a fluorine-containing acrylic acid ester (acrylic ester), in which 2-bromo-3,3,3-trifluoropropene is reacted with a straight aliphatic alcohol, among others, along with a palladium catalyst, carbon monoxide and

two kinds of bases, diethylamine and triethylamine (page 288, scheme 1; page 292, second column, section 4.1; page 288, second column, third paragraph, second sentence; page 289, table 1).



2-Bromo-3,3,3-Trifluoropropene Acrylic Ester

In reference to the claim limitation that one of the bases should be an amine, since Matteoli et al. states that the alkoxycarbonylation process to form the acrylic ester (page 288, second column, third paragraph, second sentence) uses the same conditions as the carbonylation process (page 292, second column, section 4.1), it is suggested that both diethylamine and triethylamine are used in the process to form the acrylic ester.

Matteoli et al. is deficient in that it does not teach that one of the bases is an inorganic base, an inorganic salt or an organic metal.

Fuchikami et al. teaches a process for preparing fluorine-containing carboxylic acid esters using a base, carbon monoxide, an alcohol and a transition metal catalyst, which includes a palladium catalyst (abstract; column 2, line 68). The bases that can be used are inorganic bases or tertiary amines, in an amount between 0.5 to 5 molar

equivalent compared to the fluorine-containing alkyl halide starting material (column 3, lines 34-44).

The Examiner acknowledges Applicant's argument that Matteoli et al. uses amine bases for the amidocarbonylation reaction, not for the alkoxycarbonylation reaction. Also acknowledged is Applicant's argument that both diethylamine and triethylamine bases are not used for the alkoxycarbonylation reaction in Matteoli et al.

Applicant's arguments have been fully considered but are not persuasive for the following reasons. Matteoli et al. uses the bases tributylamine, and alternatively tripropylamine, for the alkoyxcarbonylation reaction, as explicitly stated (page 289, table 1). As far as the reference to using the "same conditions" for the amidocarbonylation reaction and the alkoxycarbonylation reaction, even if both amine bases are not used for the alkoxycarbonylation reaction in Matteoli et al., Fuchikami et al. teaches the equivalency of using triethylamine and potassium carbonate as shown in examples 10 and 21 (column 8, example 10, lines 20-44; column 11, example 21, lines 40-62). In addition, Fuchikami et al. teaches the base can be used in amounts ranging from 0.5 to 5 molar equivalents (column 3, lines 42-44).

Therefore, it would be prima facie obvious to one of ordinary skill in the art to use combination of bases, absent evidence to the contrary. Applicant has not shown unexpected results that are due to the combination of two bases. The Examiner points to the yields in Fuchikami et al. which produce up to 93% yield, using triethylamine as the base (column 8, example 8, lines 4), in comparison to Applicant's examples with lower yields (see example 1, 74.9% yield, page 12, line18).

It would also be prima facie obvious to one of ordinary skill in the art at the time of the invention, to use the inorganic base of Fuchikami et al. for the amine base of Matteoli et al. The expected result would be the effective synthesis of fluorine-containing acrylic acid esters for use in pharmaceuticals and functional polymers.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Y. Cho whose telephone number is (571) 272 6246. The examiner can normally be reached on 9 AM - 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on (571) 272 0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer Cho
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